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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/893,548	06/29/2001	Junichi Matsushita	010851	4476

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EXAMINER

PRITCHETT, JOSHUA L

ART UNIT	PAPER NUMBER
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2872

DATE MAILED: 06/30/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/893,548

Applicant(s)

MATSUSHITA ET AL.

Examiner

Joshua L Pritchett

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 13 May 2003.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-9 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-9 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 29 June 2001 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on _____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- 1) ☐ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) _____
- 4) ☐ Interview Summary (PTO-413) Paper No(s). _____
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other:

DETAILED ACTION

This action is in response to Amendment A filed May 13, 2003. Claims 1 and 3-9 have been amended as requested by the applicant.

Claim Rejections - 35 USC § 103

The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.

Claims 1-9 are rejected under 35 U.S.C. 103(a) as being unpatentable over Arnett in view of Riser and Savage.

Regarding claim 1, Arnett teaches a body containing a light-leading path to transmit light from one point to another. Arnett further teaches an outer tube portion (46) concentric with respect to the light leading path (Fig. 4A) and substantially coextensive therewith (Fig. 4A). Arnett lacks the claimed conic shape. Riser teaches a light-leading path in a frusto-conical shape for transmitting light to or from a transmitting or receiving module (Fig. 3). Arnett further lacks the claimed radial projecting portion being on the side of the optical fiber. Savage teaches a peripheral projection (30) extending in a radial direction and interconnecting the outer tube portion (35) and the light leading path (10). It would have been obvious to a person of ordinary skill in the art at the time the invention was made to have the light leading path taught by Arnett have the conic shape taught by Riser and the peripheral projection taught by Savage for the

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purpose of transmitting the exiting light from the path to a more precise location and properly position the light leading path with respect to the transmitting or receiving module.

Regarding claim 2, Arnett teaches the projecting portion circularly formed and coaxial with the light-leading path (Fig. 3a). Arnett further teaches the outer tube being cylindrical and coaxial with the light-leading path (Fig. 3a).

Regarding claim 3, Arnett teaches the outer tube diameter being substantially constant (Fig. 3a).

Regarding claim 4, Arnett teaches the outer tube has flange (38) projecting annularly in the radial direction (Fig. 3a).

Regarding claim 5, Arnett in combination with Riser teaches the invention as claimed but lacks reference to a convex lens at one end of the path. Savage teaches the use of a convex lens (14) at the end of a light-leading path to direct the light into the path. It would have been obvious to a person of ordinary skill in the art at the time the invention was made to use the convex lens taught by Savage in the Arnett in combination with Riser invention for the purpose of directing the light into the path.

Regarding claim 6, Arnett in combination with Riser teaches the invention as claimed but lacks reference to the convex lens not projecting over an optical side of the path. Savage teaches the convex lens not projecting over the optical side of the path (Fig. 1). It would have been obvious to a person of ordinary skill in the art at the time the invention was made to combine the convex lens of Savage with the invention of Arnett in combination with Riser for the purpose of directing light into the optical path of the Arnett invention.

Regarding claims 7-9, Arnett in combination with Riser teaches the invention as claimed but lack reference to the transmitting portion being smaller than the receiving portion of any light exchanged between the path and the receiving or transmitting module. Savage teaches that the transmitting source should be smaller than the receiving source at either end of the path. Savage's light emitting source (15) is smaller than the receiving end of the path (13) and the path is smaller than the end receiving face (12). Savage also shows the reason for the need to have the light transmitting object be smaller than the light-receiving object with the light rays (23-27) as they disperse once they exit the transmitting source (Fig. 1). Optical paths that are capable of transmitting light in either direction are commonly known in the art and therefore it is within the skill of one ordinarily skilled in the art to have light incident either end of the light-leading path, therefore the direction of light transmission is not given significant patentable weight. It would have been obvious to one of ordinary skill in the art at the time the invention was made to combine the teachings of Savage that light transmitting sources must be smaller than light receivers with the Arnett in combination with Riser invention for the purpose of transferring all the light from the transmitter to the receiver without the loss of information.

Response to Arguments

Applicant's arguments filed May 13, 2003 have been fully considered but they are not persuasive.

On pages 13-14 of Amendment A, applicant argues that Arnett does not show a concentrically surrounding frusto-conical path. The examiner admits in that Arnett lacks the newly claimed frusto-conical shape; however Riser teaches the claimed shape as stated in the rejection of claim 1 above. It is within the skill of one ordinarily trained in the art to change the shape of the Arnett light-leading path to the shape of the Riser light-leading path. One would have been motivated to do so for the purpose of focusing the light in the light-leading path through the use of the conical shape.

On page 14 of Amendment A, applicant argues that Riser and Savage do not cure the defects of Arnett, specifically in reference to the shape limitation. This argument is an extension of the previous argument discussed above in relation to the teachings of Arnett and Riser.

On page 14 of Amendment A, applicant argues the Savage projection 32 does not extend between nor interconnect an outer-tube portion. The examiner admits that projection 32 of Savage does not teach this limitation; however as stated in the Previous Office Action (Paper No. 6) projection 30 of Savage meets the claim limitation (page 3 of Paper No. 6) not projection 32. The projection (30) of Savage interconnects the light leading path (10b) of Savage and the outer-tube portion (35) of Savage as shown in Fig. 1.

Conclusion

THIS ACTION IS MADE FINAL. Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

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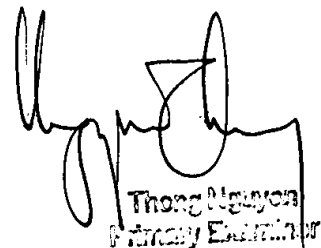
A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Joshua L Pritchett whose telephone number is 703-305-7917. The examiner can normally be reached on Monday - Friday 7:00 - 3:30.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Cassandra Spyrou can be reached on 703-308-1687. The fax phone numbers for the organization where this application or proceeding is assigned are 703-872-9318 for regular communications and 703-872-9319 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is 703-308-0956.

JLP
June 23, 2003



Thong Nguyen
Primary Examiner